Focus on **Hanford site cleanup**

from Ecology's Office of Communication & Education

Hanford's history

1. **The Hanford site** just north of the Tri-Cities was created by the federal government during our nation's effort to build the first atomic bomb in World War II. Production at the site continued throughout the Cold War.

2. Nuclear reactors and related processing facilities built along the Columbia River produced plutonium and other nuclear materials, leaving **tons of chemical and nuclear waste in the buildings, soil, and groundwater.**

3. In May 1989, the U.S. Environmental Protection Agency, the Washington State Department of Ecology and the U.S. Department of Energy signed the Tri-Party Agreement that created a **legally enforceable schedule of Hanford cleanup commitments**.

4. Today Hanford is the **largest environmental cleanup project in the nation** and involves chemically toxic and radioactive materials.

Hanford projects

1. **The Tank Waste Storage Project** manages highly radioactive waste in 177 underground storage tanks that range in capacity from 50,000 to more than 1 million gallons. Most (149) of the tanks are single-shell tanks that are well beyond their planned life expectancy of 20 years. Of these, 67 tanks have been declared known or assumed leakers that have released more than 1 million gallons of waste to the soil and groundwater; this waste is now moving toward the Columbia River. More than 3 million gallons of waste from single-shell tanks has been placed in new, double-shell tanks. Eventually the waste will be transferred to the Waste Treatment Plant for vitrification and immobilization.

2. **The Waste Treatment Plant** is designed to treat the more than 53 million gallons of hazardous and high-level radioactive nuclear waste currently stored in 177 aging tanks. The plant is projected in 2011 to begin removing the waste from the old tanks, treating and immobilizing it in glass logs through vitrification. Vitrification is a process by which a liquid is turned into a glass. Tank waste will be mixed with molten glass and poured into stainless steel containers for cooling and storage while the radioactivity levels decrease over hundreds to thousands of years.

3. **The Hanford Waste Management Project** involves mixed wastes (waste with hazardous and radioactive components) at Hanford and at waste sites throughout Washington state. Facilities handle liquid as well as solid waste and include the Waste Receiving and Processing facility, the Central Waste Complex, Low Level Burial Grounds, Pacific EcoSolutions, U.S. Ecology operating facilities, the 200 and 300 Area Effluent Treatment facilities and the Liquid Effluent Retention Facility.

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4. **The Environmental Restoration Project** oversees the cleanup of contaminated soil, groundwater and ancillary buildings throughout the Hanford site. It focuses on contamination in soil, groundwater, surface water and sediment, plants and animals.

5. **The Facility Transition Project** involves the decontamination and decommissioning of Hanford facilities. Those facilities include: 100 area reactors; a generating plant; plutonium finishing plant; U plant; B plant; plutonium uranium extraction facility; waste encapsulation storage facility; facilities in Hanford's 300 area (including facilities operated by the Pacific Northwest National Laboratory); and Hanford's Fast Flux Test Facility.

Hanford safeguards

1. Efforts are under way to **prevent further groundwater pollution** and to prevent polluted water from reaching the Columbia River.

2. Soil and water across the Hanford site is **continuously monitored** to make sure the health of people and the environment is protected.

If you need this information in an alternate format, please contact 360-407-7000. If you are a person with a speech or hearing impairment, call 711 or 1-800-833-6388 for TTY.